

# NOAA In Your State New Hampshire

NOAA is an agency that enriches life through science. Our reach goes from the surface of the sun to the depths of the ocean floor as we work to keep citizens informed of the changing environment around them. From daily weather forecasts, severe storm warnings, and climate monitoring to fisheries management, coastal restoration and supporting marine commerce, NOAA's products and services support economic vitality and affect more than one-third of America's gross domestic product. NOAA's dedicated scientists use cutting-edge research and high-tech instrumentation to provide citizens, planners, emergency managers and other decision makers with reliable information they need when they need it.

The following is a summary of NOAA facilities, staff, programs, or activities based in, or focused on, your state or territory: Starting with highlights, then by <u>congressional districts and cities or towns</u>, <u>coastal programs</u>, and then <u>statewide programs</u>.

# <u>Highlights of NOAA in New Hampshire</u>

Cooperative Institute for Coastal and Estuarine Environmental Technology	Durham	NH-1
Exploration Command Center	Durham	NH-1
Great Bay National Estuarine Research Reserve	Greenland	NH-1
Bay-Watershed Education and Training Program	Statewide	NH

The state of New Hampshire also has one Cooperative Institute, one Regional Office, one Science on a Sphere® exhibition, and one National Estuarine Research Reserve.

### Science On a Sphere®

Concord NH-2

Science On a Sphere (SOS) is a room-sized global display system that uses computers and video projectors to display planetary data onto a six-foot diameter sphere, analogous to a giant animated globe. Researchers at NOAA developed Science On a Sphere® as an educational tool to help illustrate Earth System science to people of all ages. Animated images of atmospheric storms, climate change, and ocean temperature can be shown on the sphere, which is used to explain in a way that is simultaneously intuitive and captivating what are sometimes complex environmental processes. It is located at St. Paul's School in Concord.

# NH-1 Durham

# Office of Oceanic and Atmospheric Research (OAR) - U.S. Climate Reference Network

The US Climate Reference Network (USCRN) is an operationally viable research network of more than 138 climate stations that are deployed nationwide. Data from the USCRN are used in various climate monitoring activities and for placing current climate anomalies into an historical perspective. The USCRN provides the United States with a reference network that contributes to an International network under the auspices of the Global Climate Observing System (GCOS). ARL/ATDD manage the USCRN in partnership with NOAA's NESDIS/NCEI.

### National Ocean Service (NOS) - Joint Hydrographic Center

The University of New Hampshire was awarded a new 5-year grant in 2021 to collaborate through the Joint Hydrographic Center (JHC) to expand research and education in the hydrographic and ocean mapping sciences. A national center of expertise, the JHC is challenging a new generation of upcoming hydrographers and ocean mapping scientists to meet emerging public and private needs for acquiring ever more precise data about ocean floors and the marine environment. The JHC is particularly valuable in research and development efforts to improve scientific understanding and technical capabilities for surveying and mapping, particularly with respect to unmanned systems. NOAA contributes personnel and significant appropriation through grants funding to the JHC; the University of New Hampshire contributes funding, faculty and staff, lab and office space, supplies and services. NOAA's Integrated Ocean and Coastal Mapping (IOCM) Processing Center is co-located at JHC. Employees at the IOCM center help create products derived from hydrography for non-navigation products such as marine debris evaluations and seafloor backscatter maps.

### National Ocean Service (NOS) - Great Bay National Estuarine Research Reserve

The National Estuarine Research Reserve System is a network of protected areas focused on long-term research, monitoring, stewardship, education, and training. NOAA's Office for Coastal Management provides funding and national guidance, and each site is managed on a daily basis by a lead state agency or university with input from local partners. The 10,235-acre Great Bay Research Reserve, designated in 1989 and managed by the New Hampshire Department of Fish and Game, is a "drowned river valley" estuary composed of upland forest, salt marsh, mudflats, tidal creeks, rocky intertidal, eelgrass beds, and upland field habitats. The Bay's cultural heritage is equally diverse, from paleo-Indian villages dating to 6,000 years ago to colonial transportation and industrial use, to a proposed oil refinery in 1973.

### National Ocean Service (NOS) - Margaret A. Davidson Graduate Fellowship

The Margaret A. Davidson Graduate Fellowship program funds graduate student research and professional development opportunities within the National Estuarine Research Reserve System. The program supports collaborative research addressing local management challenges that may influence future policy and management strategies. The Davidson Fellow at Great Bay National Estuarine Research Reserve will focus their research on stressors and ecological responses in the Great Bay estuary.

### National Ocean Service (NOS) - Coastal Response Research Center

Located at the University of New Hampshire, the Coastal Response Research Center was established as a partnership between NOAA, through the Office of Response and Restoration (OR&R), and the University of New Hampshire (UNH). The Center is administered by and located at the UNH campus in Durham, NH. This partnership stimulates innovation in spill preparedness, response, assessment, and implementation of optimum spill recovery strategies. The primary purpose of the Center is to bring together the resources of a research-oriented university and the field expertise of OR&R to conduct and oversee basic and applied research, conduct outreach, and encourage strategic partnerships in spill response, assessment and restoration. The Center involves individuals and institutions, public and private, at local, regional, national and international levels in identifying needs, evaluating and demonstrating promising technologies, and fostering their use as part of new approaches to response and restoration.

# Office of Oceanic and Atmospheric Research (OAR) - Exploration Command Center

NOAA's Office of Ocean Exploration and Research focuses on interdisciplinary exploration; systematic research of extreme and unique environments, continental shelf ecosystems, new ocean resources, and ocean dynamics; advanced technology development; and communication of results through education and outreach. In addition to the Exploration Command Center at the University, OER works with the University of New Hampshire's Joint Hydrographic Center, Center for Coastal and Ocean Mapping and the Integrated Ocean and Coastal Mapping program to plan and coordinate expeditions in support of a U.S. Extended Continental Shelf. The University is also the site where much of OER's remotely operated vehicle (ROV) technical development and testing is done, and it is the key source of talent for OER's ocean mapping team. There is also an Exploration Command Center located at the University where scientists ashore participate in real time in certain expeditions at sea when seafloor video is sent ashore via satellite and Internet pathways.

### **Portsmouth**

### National Ocean Service (NOS) - Portsmouth PORTS®

A Physical Oceanographic Real-Time System (PORTS®) is operated cooperatively with the local maritime community in Portsmouth Harbor with real-time data quality-controlled and disseminated to local users for safe and efficient navigation. Real-time water level observations are available from one station.

#### New Castle

### National Marine Fisheries Service (NMFS) - Office of Law Enforcement

NOAA's Office of Law Enforcement is the only conservation enforcement program (Federal or State) that is exclusively dedicated to Federal fisheries and marine resource enforcement. Its mission is to protect global marine resources by enforcing domestic laws and international treaties and obligations dedicated to protecting wildlife and their natural habitat. Our special agents and enforcement officers ensure compliance with these laws and take enforcement action if there are violations. Additionally, the Cooperative Enforcement Program allows NOAA the ability to leverage the resources and assistance of 27 coastal states and U.S. territorial marine conservation law enforcement agencies in direct support of the Federal enforcement mission. Effective fisheries law enforcement is critical to creating a level playing field for U.S. fishermen and enabling sustainable fisheries to support vibrant coastal communities. The Office of Law Enforcement's Northeast Division is headquartered in Gloucester, MA, with a New Hampshire field office in New Castle.

### Office of Marine and Aviation Operations (OMAO) - NOAA Ship Ferdinand R. Hassler

The NOAA Ship *Ferdinand R. Hassler* is managed by NOAA's Marine Operations Center-Atlantic in Norfolk, Virginia. The ship is a Coastal Mapping Vessel utilizing the Small Waterplane Area Twin Hull (SWATH) design for improved stability and seakeeping. The newest addition to NOAA's hydrographic charting fleet, the ship is designed to operate from the Great Lakes to the Gulf of Mexico. Its primary mission is hydrographic survey in support of NOAA's nautical charting mission. The ship is also capable of performing Automated Underwater Vehicle (AUV) operations, Remotely Operated Vehicle (ROV) operations, buoy deployment and recovery, and general oceanographic research. The NOAA Ship *Ferdinand R. Hassler* supports NOAA's mission to protect, restore, and manage the use of coastal and ocean resources through an ecosystem approach to management.

The vessel is operated under the direction of officers from the NOAA Commissioned Officer Corps in concert with NOAA civilian Wage Mariners. The NOAA Corps today provides a cadre of professionals trained in engineering, earth sciences, oceanography, meteorology, fisheries science, and other related disciplines. Officers operate ships, fly aircrafts, conduct diving operations, and serve in other NOAA staff positions. NOAA Wage Mariners perform the deck, engineering, steward, and survey tech functions aboard NOAA vessels, providing critical support to NOAA missions.

### Rye [Isle of Shoals]

### Office of Oceanic and Atmospheric Research (OAR) - Carbon Cycle Gases and Halocarbons

NOAA's Earth System Research Laboratory Global Monitoring Laboratory(ESRL/GML) operates a small aircraft-based North American network of sampling sites to measure vertical profiles of important greenhouse gas concentrations. Air is sampled above the surface up to approximately 25,000 feet above sea level using a relatively small, light, and economical automated system developed by ESRL researchers. These air samples are delivered to ESRL/GML in Boulder, Colorado for measurements of CO2, CH4, and other greenhouse gasses. This data will improve understanding and models of the global carbon cycle. Sampling is conducted bi-weekly. Some air samples from the small aircraft program are also analyzed for halocarbon gases that can destroy the stratospheric ozone layer. Halocarbon measurements help determine the effectiveness of efforts to protect and restore the ozone layer so it can protect us from the sun's ultraviolet radiation.

# NH-2 Concord

### Office of Oceanic and Atmospheric Research (OAR) - Science On a Sphere® at St. Paul's School

Science On a Sphere (SOS) is a room-sized global display system that uses computers and video projectors to display planetary data onto a six-foot diameter sphere, analogous to a giant animated globe. Researchers at NOAA developed Science On a Sphere® as an educational tool to help illustrate Earth System science to people of all ages. Animated images of atmospheric storms, climate change, and ocean temperature can be shown on the sphere, which is used to explain complex environmental processes in a way that is simultaneously intuitive and captivating.

# NOAA Office of Education - Environmental Literacy Program

NOAA's Environmental Literacy Program (ELP), administered by the Office of Education, provides grants and in-kind support to advance NOAA's mission through formal (K-12) and informal education. In New Hampshire, ELP supports the St. Paul's School (Merrimack), which has a permanent exhibit featuring NOAA's Science On a Sphere (SOS) and is a member of NOAA's SOS Users Collaborative Network (SOS Network). The SOS Network connects over 150 science education institutions worldwide to the latest NOAA data as part of a focused effort to increase environmental literacy at all ages.

### Nashua

### National Weather Service (NWS) - Center Weather Service Unit

Housed in the Federal Aviation Administration's Boston Air Route Traffic Control Center (ARTCC), the NWS Center Weather Service Unit (CWSU) in Nashua provides forecasts and other weather information to ARTCC personnel for use in directing the safe, smooth flow of aviation traffic. The area covered includes Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, most of Connecticut, and all of New York except the western part, and eastern Long Island, New York.

### **Plymouth**

### Office of Oceanic and Atmospheric Research (OAR) - Hydrometeorology Testbed

NOAA's Earth System Research Laboratory Physical Sciences Division (PSD) deployed a snow level radar on the campus of Plymouth State University in Plymouth, NH. The snow level, or the altitude in the atmosphere where snow changes into rain, is a critical parameter influencing runoff in mountainous watersheds because it determines the surface area of the watershed that will be exposed to rain versus snow. When the snow level is above most or all of the terrain in a watershed, a storm is more likely to produce enough rapid runoff to cause flooding. If the snow level is low in a watershed, then a storm increases the snowpack, providing valuable storage of water for potential later use. The snow-level radar is a small, relatively inexpensive radar that was designed by ESRL/PSD and University of Colorado engineers to reliably detect the snow level during precipitation.

### National Ocean Service (NOS) - Students for **Zero Waste Week**

Students are inviting their local communities to "Go Green and Think Blue" by joining them in the annual *Students for Zero Waste Week campaign*. During this campaign led by the Office of National Marine Sanctuaries, students focus on reducing land-based waste in order to protect the health of local marine environments. These young leaders are raising awareness of how single-use plastic and other types of litter affect the health of local watersheds, national marine sanctuaries, and the ocean. In addition, some schools are looking at ways to reduce their energy use on campus with hopes of raising awareness of how the burning of fossil fuels also impacts the health of the ocean.

#### Coastal

### National Marine Fisheries Service (NMFS) - Deep-Sea Coral Research and Technology Program

NOAA's Deep Sea Coral Research and Technology Program is the only federal program dedicated to mapping, characterizing, and understanding deep-sea coral ecosystems, and sharing the information needed to conserve these habitats. The Program -- called for in the reauthorization of the Magnuson-Stevens Fishery Conservation and Management Act and within the Office of Habitat Conservation -- is working with other NOAA offices and external partners to conduct fieldwork to study the distribution, abundance, and diversity of deep sea corals and sponges. Since 2009, more than 42,500 square miles of seafloor have been mapped and surveyed for deep-sea coral habitats from Florida to Maine, in Alaska and the West Coast, and in Hawaii and the Marianas Trench.

### National Marine Fisheries Service (NMFS) - Sea Turtle Salvage and Stranding Network

The Sea Turtle Stranding and Salvage Network (STSSN) was formally established in 1980 to collect information on and document strandings of marine turtles along the U.S. Gulf of Mexico and Atlantic coasts. The network, which includes federal, state and private partners, encompasses the coastal areas of the eighteen-state region from Maine to Texas, and includes portions of the U.S. Caribbean. Data gathered by the Network helps inform bycatch reduction efforts, monitor factors affecting turtle health, and provide other information needed for sea turtle management and population recovery.

# National Marine Fisheries Service (NMFS) - <u>National Marine Mammal Stranding Network</u> and <u>John H. Prescott</u> <u>Marine Mammal Rescue Assistance Grant Program</u>

The National Marine Mammal Stranding Network and its trained professionals respond to dead or live marine mammals in distress that are stranded, entangled, out of habitat or otherwise in peril. Our long-standing partnership with the Network provides valuable environmental intelligence, helping NOAA establish links among the health of marine mammals, coastal ecosystems, and coastal communities as well as develop effective conservation programs for marine mammal populations in the wild. There is one stranding network member in the state. NOAA Fisheries funds eligible members of the Stranding Network through the competitive John H. Prescott Marine Mammal Rescue Assistance Grant Program. For fiscal year 2020, 43 competitive Prescott Grants were awarded for a total of \$3.7 million nationwide, including one for \$44,687in New Hampshire to Seacoast Science Center, Inc.

### National Ocean Service (NOS) - Navigation Manager

NOAA's navigation managers work directly with pilots, port authorities, and recreational boating organizations in New Hampshire. They help identify the navigational challenges facing marine transportation in the Northeast region and provide NOAA's resources and services that promote safe and efficient navigation. Navigation managers are on call to provide expertise and NOAA navigation response coordination in case of severe coastal weather events or other marine emergencies. The Office of Coast Survey has a navigation manager in Narragansett, RI, to support mariners and stakeholders in the Northeast region.

### National Ocean Service (NOS) - Navigation Response Team

The Office of Coast Survey (OCS) maintains the nation's nautical charts and publications for U.S. coasts and the Great Lakes. OCS navigation managers are strategically located in U.S. coastal areas to provide regional support to federal and state agencies in order to assist with navigational challenges. The Office of Coast Survey's Navigation Response Branch (NRB) conducts routine and emergency hydrographic surveys; and working with the regional Navigation Managers, navigation response teams (NRT) work around-the-clock after storms to speed the reopening of ports and waterways. During emergency response, the NRTs provide time-sensitive information to the U.S. Coast Guard or port officials, and transmit data to NOAA cartographers for updating the Coast Survey's suite of navigational charts. NRT-New London is homeported in New London, CT and is able to respond in the region within 24 to 48 hours.

### National Ocean Service (NOS) - Coastal and Estuarine Land Conservation Program

The Coastal and Estuarine Land Conservation Program brings conservation partners together to protect coastal and estuarine lands considered important for their ecological, conservation, recreational, historical, or aesthetic values. Subject to availability of funding, the program provides state and local governments with matching funds to purchase coastal and estuarine lands or obtain conservation easements for important lands threatened by development. Since 2002, the program has protected more than 110,000 acres of coastal land nationally, including over 16,000 acres protected as in-kind matching contributions. NOAA awarded nine grants in New Hampshire, and these lands are protected in perpetuity.

# National Ocean Service (NOS) - <u>National Coastal Zone Management Program</u>

Through a unique federal-state partnership, NOAA's Office for Coastal Management works with the New Hampshire Department of Environmental Services to implement the National Coastal Zone Management Program in New Hampshire. NOAA provides the state coastal management program with financial and technical assistance to further the goals of the Coastal Zone Management Act and ensure coastal waters and lands are used in a balanced way to support jobs, reduce use conflicts, and sustain natural resources.

### National Ocean Service (NOS) - Coastal Management Fellowship

This program matches postgraduate students with state and territory coastal zone programs to work on two-year projects proposed by the state or territory. The New Hampshire Coastal Program is hosting a fellow from 2019-2021 who is working to develop creative funding mechanisms and policy to support on-the-ground adaptation and resilience in coastal New Hampshire communities.

### National Ocean Service (NOS) - Digital Coast

The Digital Coast is a focused information resource developed to meet the unique needs of coastal communities. Developed and maintained by NOAA's Office for Coastal Management, content comes from hundreds of organizations, including federal, state, and local agencies, plus private sector and non-profit contributors. The Digital Coast website provides not only site-specific coastal data, but also related the tools, training, and information needed to make these data useful for coastal decision makers.

### National Ocean Service (NOS) - National Coastal Resilience Fund

The National Coastal Resilience Fund is a partnership effort between NOAA and the National Fish and Wildlife Foundation (NFWF) to restore, increase, and strengthen natural infrastructure to protect coastal communities, while also enhancing habitat for fish and wildlife. In New Hampshire, three projects have been funded, one each in FY18-20.

### National Ocean Service (NOS) - Scientific Support Coordinator and Regional Resource Coordinator

NOAA's Office of Response and Restoration (OR&R) brings decades of experience, technical expertise and scientific analysis in response to oil and hazardous chemical spills. In addition to events that draw the national eye like Hurricane Sandy, OR&R also supports response to local emergencies. Eleven regionally based Scientific Support Coordinators (SSCs) harness the input of a multi-disciplinary team to address issues such as oil slick trajectory forecasting, environmental tradeoffs, best practices, resources at risk, oil science and properties, and chemical hazard assessment to reduce risks to coastal habitats and resources. The SSC works directly with the U.S. Coast Guard and the U.S. Environmental Protection Agency to provide critical scientific support to the Federal On-Scene Coordinator. OR&R also helps develop preparedness plans that identify spill response actions with the greatest environmental benefit and trains hundreds of members of the response community each year on the scientific and technical aspects of spills.

OR&R's Regional Resource Coordinators (RRCs) provide scientific and technical expertise and timely response to oil spills or hazardous materials releases to collect information, samples, and evidence that are time dependent and critical to support natural resource damage assessments throughout the coastal US. RRCs work on multi-disciplinary scientific, economic, and legal teams and are responsible for determining and quantifying injuries to NOAA trust natural resources through determination of injuries and pathway, and demonstration of causal mechanisms. The goal of the RRCs efforts is to determine, often through the Damage Assessment, Remediation, and Restoration Program, the appropriate amount and type of restoration required to restore injured NOAA trust resources and compensate the public for their lost use.

# National Ocean Service (NOS) – Atlantic <u>Environmental Response Management Application</u>

Assessing important spatial information and designing successful restoration projects rely upon interpreting and mapping geographic information, including the location, duration, and impacts from oil spills, other hazardous materials, or debris released into the environment. Atlantic Environmental Response Management Application (ERMA®) is an online mapping tool that integrates both static and real-time data, such as Environmental Sensitivity Index maps, ship locations, weather, and ocean currents, in a centralized, easy-to-use format for environmental responders and decision makers. ERMA staff continued to work closely with Federal and State agencies for drills, hurricane response, and incidents. Maintained habitat data for sensitive species. Ensured data was kept up-to-date and data collection methods were kept consistent.

### National Ocean Service (NOS) - Marine Debris Projects and Partnerships

The NOAA Marine Debris Program (MDP) leads national and international efforts to research, prevent, and reduce the impacts of marine debris. The program supports marine debris removal, education and outreach, and research projects in partnership with state and local agencies, tribes, non-governmental organizations, academia, and industry. The MDP Northeast Regional Coordinator supports coordination efforts with regional stakeholders, provides support to grant-funded projects, tracks progress of projects, and conducts regional marine debris outreach to local audiences. The Gulf of Maine Marine Debris Action Plan, covering Maine, New Hampshire, Massachusetts, and partners across the Canadian border, was published in 2019 with the help of more than 30 different organizations. The plan establishes a comprehensive framework for strategic action to ensure the Gulf of Maine and its coasts, people, and wildlife are free from the impacts of marine debris.

# National Ocean Service (NOS) - <u>U.S. Integrated Ocean Observing System</u> (<u>Northeastern Regional Association of Coastal Ocean Observing Systems</u>)

The U.S. Integrated Ocean Observing System, or IOOS®, is a federally and regionally coordinated observing system with 17 interagency and 11 regional partners. The System addresses regional and national needs for coastal, ocean, and Great Lakes data and information. This includes gathering and disseminating regional observations; data management; modeling and analysis; education and outreach; and research and development. The Northeastern Regional Association of Coastal Ocean Observing Systems (NERACOOS) is one of the 11 Regional Associations and was established to network and expand the existing observing and prediction capacities of a multitude of institutions and agencies throughout New England and Maritime Canada. NERACOOS supports infrastructure that provides over-water meteorological and wave observations critical to safe navigation to the National Weather Service in Long Island Sound and the Gulf of Maine.. These platforms also support current and dissolved oxygen sensors that provide critical information for management of hypoxia and harmful algal bloom. Fisheries managers, water quality specialists, the Coast Guard, and many others benefit from accurate and timely ocean observing infrastructure and related decision support tools. The region includes the coastal waters of Maine, New Hampshire, Massachusetts, Rhode Island, and Connecticut. There is overlap with the Mid-Atlantic Coastal Ocean Observing Regional Association (MARACOOS), which also includes the coastal waters of Connecticut and Rhode Island. In addition, partners from the Canadian provinces of New Brunswick and Nova Scotia will be involved to ensure appropriate coverage in shared waters.

### National Weather Service (NWS) - Buoys

The National Weather Service (NWS), through its National Data Buoy Center (NDBC), develops, deploys, operates, and maintains the current national data buoy network of moored and drifting weather buoys and land stations that serve all of the Nation's coastal states and territories. Within this network, 110 of the buoys and 51 of the land stations are maintained directly by NDBC. Located at NASA's Stennis Space Center in Mississippi, supports weather and marine warning and forecast services in real time by providing deep ocean and coastal meteorological and oceanographic observations. These data provide valuable information used by NWS supercomputers to produce computer-generated model forecasts of the atmosphere and climate. NDBC manages the Volunteer Observing Ship program to acquire additional meteorological and oceanographic observations supporting NWS mission requirements. NDBC also supports operational and research programs of NOAA and other national and international organizations.

### Statewide

# National Marine Fisheries Service (NMFS) - <u>Bay Watershed Education and Training Program</u>

The NOAA Bay Watershed Education and Training (B-WET) program is an environmental education program that promotes locally relevant, experiential learning in the K-12 environment. The primary delivery of B-WET is through

competitive funding that promotes Meaningful Watershed Educational Experiences (MWEEs). The New England B-WET program recognizes that knowledge and commitment built from firsthand experience, especially in the context of one's community and culture, is essential for achieving environmental stewardship. New England B-WET responds to regional education and environmental priorities through local implementation of competitive grant funds.

National Marine Fisheries Service (NMFS) - <u>Greater Atlantic Regional Office</u>, <u>Northeast Fisheries Science Center</u> NMFS is responsible for the management, conservation and protection of living marine resources within the United States' Exclusive Economic Zone (water three to 200 mile offshore). Using the tools provided by the *Magnuson-Stevens Act*, NMFS assesses and predicts the status of fish stocks, develops and ensures compliance with fisheries regulations, restores and protects habitat and works to reduce wasteful fishing practices, and promotes sustainable fisheries. Under the *Marine Mammal Protection Act* and the *Endangered Species Act*, NMFS recovers protected marine species (e.g. whales, turtles).

The Greater Atlantic Regional Fisheries Office (located in Gloucester, MA) includes divisions that promote sustainable fisheries, habitat conservation, and recovery of protected species, and conducts statistical analysis and programs supporting these divisions. Key fish species managed in the Greater Atlantic Region include the northeast "multispecies complex" (cod, haddock, yellowtail flounder etc.), Atlantic sea scallops, herring, lobster, and summer flounder. Key marine endangered species in this region are North Atlantic right whales, leatherback, loggerhead, and Kemp's ridley sea turtles, Atlantic salmon and Atlantic and shortnose sturgeon. NMFS is the lead agency coordinating the Large Whale and Sea Turtle Disentanglement Program activities and the Marine Mammal Health and Stranding Response Program activities. The core functions of these programs include coordinating volunteer networks to: respond to entanglements and strandings, investigate mortality events, and conduct biomonitoring, tissue/serum banking, and analytical quality assurance. The Office also fosters sustainable <u>aquaculture</u> in the region, with two Regional Aquaculture Coordinators that act as a liaison between federal and state agencies to assist in permitting and coordination activities, supporting aquaculture outreach and education, and collaborating with industry, academia and other stakeholders on regional marine aquaculture issues.

The Northeast Fisheries Science Center (headquartered in Woods Hole, MA) focuses on collection, analysis, and presentation of scientific information about the Northeast Shelf ecosystem, its condition, and its marine life. In addition to its five laboratories, the Center uses four research vessels to support its work. They are: the NOAA ships *Henry B. Bigelow*, and the small research vessels *Gloria Michelle Victor Loosanoff*, and *Nauvoo*. The Greater Atlantic Regional Fisheries Office and the Science Center are responsible for the District of Columbia and the following states: Maine, New Hampshire, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, and North Carolina; and the inland states of Vermont, Minnesota, Michigan, Wisconsin, Illinois, Indiana, Ohio, and West Virginia.

### National Marine Fisheries Service (NMFS) - Restoration Center

The NOAA Restoration Center, within the Office of Habitat Conservation, works with private and public partners locally and nationwide to increase fisheries productivity by restoring coastal habitat. Projects support sustainable fisheries, help recover threatened and endangered species, and reverse damage from disasters like oil spills, ship groundings, and severe storms. Through Community-based Restoration Program projects, more than 1400 acres of fisheries habitat have been restored, rehabilitated, and protected and over 300 miles of streams have been opened to migratory fish since 2000. The local community supported these restoration efforts through the time and effort of over 1,000 volunteers. TheRestoration Center works with private and public partners in New Hampshire to construct fish ladders, remove dams, widen bridges and culverts to improve tidal flushing in coastal wetlands, restore shellfish and submerged aquatic

vegetation beds, and control invasive species. All of these projects are focused on restoring enhancing migratory passage to spawning habitat for anadromous blueback herring and alewife.

# National Marine Fisheries Service (NMFS) and National Ocean Service (NOS) - <u>Damage Assessment</u>, <u>Remediation</u>, and <u>Restoration Program</u>

NOAA's Damage Assessment, Remediation, and Restoration Program (DARRP) assesses and restores habitat, fisheries, protected species and recreational uses that have been harmed by oil spills, chemical releases, and ship groundings. Working with federal, state, and tribal entities, and responsible parties, we have recovered funding from responsible parties for restoration of critical habitats, fisheries, protected species and recreational uses nationwide. These projects promote recovery of the ecosystem and provide economic benefits from tourism, recreation, green jobs, coastal resiliency, property values and quality of life.

### National Ocean Service (NOS) - Office for Coastal Management

The NOAA Office for Coastal Management practices a partner-based, boots-on-the ground regional approach to coastal management, with staff available in the eight regions. Assistance is provided to local, state, and regional coastal resource management efforts. Constituent feedback and assessments are an important part of the effort. New England staff are located in Durham, New Hampshire, Gloucester and Scituate, Massachusetts and Yarmouth, Maine. These employees represent NOAA on several regional ocean governance initiatives (e.g., Northeast Regional Ocean Council, Gulf of Maine Council, Northeast Regional Planning Body), coordinate NOAA involvement in ocean observing system activities, and support research reserves, coastal zone management, and other NOAA and state coordinated activities.

### National Ocean Service (NOS) - Regional Geodetic Advisor

The Regional Geodetic Advisor is a National Ocean Service (NOS) employee that resides in a region and serves as a liaison between the National Geodetic Survey (NGS) and its public, academic and private sector constituents within their assigned region. NGS has a Regional Geodetic Advisor stationed in Barre, Vermont including New Hampshire. The Geodetic Advisor provides training, guidance and assistance to constituents managing geospatial activities that are tied to the National Spatial Reference System (NSRS), the framework and coordinate system for all positioning activities in the Nation. The Geodetic Advisor serves as a subject matter expert in geodesy and regional geodetic issues, collaborating internally across NOS and NOAA to ensure that all regional geospatial activities are properly referenced to the NSRS.

### National Ocean Service (NOS) - Northeast Regional Ocean Council

To maintain quality constituent service, the NOAA Office for Coastal Management staff in this region work with the Northeast Regional Ocean Council and the coastal states on this board by representing NOAA and serving in leadership roles in three priority areas: ocean planning, coastal hazards resilience and ocean and coastal ecosystem health. These staff also coordinate the deployment of NOAA products and services in this region.

### National Weather Service (NWS) - Automated Surface Observing Systems Stations

The Automated Surface Observing Systems (ASOS) program is a joint effort of the National Weather Service (NWS), the Federal Aviation Administration (FAA), and the Department of Defense (DOD). ASOS serves as the Nation's primary surface weather observing network. ASOS is designed to support weather forecast activities and aviation operations and, at the same time, support the needs of the meteorological, hydrological, and climatological research communities. ASOS works non-stop, updating observations every minute, 24 hours a day, every day of the year observing basic weather elements, such as cloud cover, precipitation, wind, sea level pressure, and conditions, such as rain, snow, freezing rain, thunderstorm, and fog. There are seven ASOS stations in New Hampshire.

### National Weather Service (NWS) - Cooperative Observer Program Sites

The National Weather Service (NWS) Cooperative Observer Program (COOP) is comprised of more than 10,000 volunteers who take observations on farms, in urban and suburban areas, National Parks, seashores, and mountaintops. The data are representative of where people live, work and play. The COOP was created to provide observational meteorological data, usually consisting of daily maximum and minimum temperatures, snowfall, and 24-hour precipitation totals, required to define the climate of the United States and to help measure long-term climate changes, and to provide observational meteorological data in near real-time to support forecast, warning and other public service programs of the NWS. The data are also used by other federal, state, and local entities, as well as private companies. For example, the energy sector uses COOP data to calculate the Heating and Cooling Degree Days which are used to determine individuals' energy bills monthly. There are 59 COOP sites in New Hampshire.

### National Weather Service (NWS) - NOAA Weather Radio All Hazards Transmitters

NOAA Weather Radio All Hazards (NWR) is a nationwide network of radio stations broadcasting continuous weather information directly from the nearest National Weather Service (NWS) forecast office. NWR broadcasts official NWS warnings, watches, forecasts and other hazard information 24 hours a day, 7 days a week. Working with the Federal Communication Commission's (FCC) Emergency Alert System, NWR is an "All Hazards" radio network, making it the single source for comprehensive weather and emergency information. In conjunction with federal, state, and local emergency managers and other public officials, NWR also broadcasts warning and post-event information for all types of hazards – including natural (such as earthquakes or avalanches), environmental (such as chemical releases or oil spills), and public safety (such as 911 Telephone outages). Known as the "Voice of NOAA's National Weather Service," NWR is provided as a public service by the NWS. NWR includes 1,100 transmitters covering all 50 states, adjacent coastal waters, Puerto Rico, the U.S. Virgin Islands, and the U.S. Pacific Territories. There are seven NWR transmitters in New Hampshire.

### Office of Oceanic and Atmospheric Research (OAR) – New Hampshire Sea Grant College Program

The National Sea Grant College Program (Sea Grant) is a federal-university partnership administered by NOAAthat integrates research, extension outreach, and education. Sea Grant forms a national network of 34 programs in all U.S. coastal and Great Lakes states, Puerto Rico, and Guam. The New Hampshire Sea Grant College Program provides support, leadership and expertise for marine research, education and extension in northern New England. It is dedicated to promoting the understanding, development, wise use and conservation of our ocean and coastal resources. Research focuses on aspects of marine economic development, including a range of fisheries and aquaculture topics, and coastal ecosystem health issues. s. Current projects focus on healthy coastal ecosystems, sustainable fisheries and aquaculture, resilient communities and economies, and environmental literacy and workforce development. Administrative offices are in Durham. Extension agents are located in Lee and New Castle.

NOAA In Your State is managed by NOAA's Office of Legislative and Intergovernmental Affairs and maintained with information provided by NOAA's Line and Staff Offices. Questions about specific programs or offices should be directed to the NOAA Line or Staff Office listed.

More information for those offices may be found at NOAA.gov.